

IN THE UNITED STATES DISTRICT COURT FOR THE
EASTERN DISTRICT OF VIRGINIA
ALEXANDRIA DIVISION

MEADWESTVACO)
CORPORATION, *et al.*,)
Plaintiffs,)
v.) CIVIL ACTION NO. 1:10cv511
REXAM PLC, *et al.*,)
Defendants.)

MEMORANDUM OPINION AND ORDER

THIS MATTER is before the Court on the parties' Motions for Summary Judgment. (Dkt. Nos. 291, 294, 297.) This case concerns a component of perfume fragrance packaging called the invisible dip tube, a tubing product that transports the fragrance from the bottle to the sprayer. The invisible dip tube virtually disappears when immersed in liquid.

There are eleven issues before the Court. The first issue is whether the Court should grant Plaintiffs MeadWestvaco Corporation and MeadWestvaco Calmar's Motion for Partial Summary Judgment as to Defendants' anticipation defense when a combination of the prior art may suggest the creation of the patents at issue. The Court grants Plaintiffs' motion because claim 15 of the '132 patent is not embodied in a single prior art reference, precluding an anticipation defense as a matter of law.

The second issue is whether the Court should grant Plaintiffs' Motion for Partial Summary Judgment in regard to Defendants' obviousness defense when (1) MWV disclosed Defendants' letters regarding obviousness to the United States Patent and Trademark Office ("PTO") prior to the patents' approval; (2) prior art taught away from the use of fluoropolymers as dip tubes because of potential carcinogens; (3) the claimed invention met a long-felt and

unmet need in the art; (4) Defendants failed to create an invisible dip tube; and (5) the claimed invention has won industry-wide acclaim and achieved commercial success. The Court grants Plaintiffs' motion because Defendants cannot prove all four obviousness factors by clear and convincing evidence.

The third issue is whether the Court should grant Plaintiffs' Motion for Partial Summary Judgment in regard to Defendants' inequitable conduct defense when Plaintiffs allegedly (1) withheld Daikin EPFP's prior art, (2) failed to disclose four pages of Drobny's prior art, and (3) misrepresented the state of the prior art in his Comments to the Examiner's Reasons for Allowance. The Court grants Plaintiffs' motion because Defendants fail to present clear and convincing evidence that Plaintiffs specifically acted with the intent to deceive the PTO.

The fourth issue is whether the Court should grant Defendant Rexam's Motion for Summary Judgment as to invalidity when (1) Plaintiffs' patents require the dip tube to have 13% crystalline content, (2) there are no industry standards for crystalline content, (3) Plaintiffs fail to provide the exact parameters for alleged infringers to test their products, and (4) the parties have stipulated to the meaning of both crystalline content and XRD crystallinity. The Court denies Rexam's motion because the terms are capable of construction as a result of the parties' stipulation as to the meaning of crystalline content and XRD crystallinity.

The fifth issue is whether the Court should grant Defendant Valois' Motion for Summary Judgment as to infringement when Valois alleges that both its old and new tubes do not "quench" because neither tube is immersed in water. The Court denies Valois' motion because both of its tubes are "quenched," as both tubes are rapidly cooled in a cooling medium.

The sixth issue is whether the Court should grant Defendant Valois' Motion for Summary Judgment on infringement under the doctrine of equivalents when Valois alleges that the

addition of the “quenched” term bars infringement. The Court grants Valois’ motion because Plaintiffs used the term “quenched” to narrow the literal scope of all claims in both patent applications to overcome prior art, depriving the term “quenched” to any equivalents.

The seventh issue is whether the Court should grant Defendant Valois’ Motion for Summary Judgment as to direct infringement as to both the “new” and “old” tubes when Valois alleges that Plaintiffs fail to establish that Valois’ infringement occurred in the United States. The Court denies Valois’ motion because there is a genuine issue of fact as to whether Valois offered to sell or imported another company’s claimed invention into the United States.

The eighth issue is whether the Court should grant Defendant Valois’ Motion for Summary Judgment as to contributory infringement as to both the “new” and “old” tubes when Valois alleges that Plaintiffs fail to establish that Valois’ infringement occurred in the United States. The Court denies Valois’ motion because there is a genuine issue of fact as to whether Valois offered to sell or imported another company’s claimed invention into the United States.

The ninth issue is whether the Court should grant Defendant Valois’ Motion for Summary Judgment as to induced infringement when Valois alleges that (1) it did not know of the patent for either the “old” or “new” tube, and (2) its belief that the tube did not “quench” negated any intent. The Court denies Valois’ motion because issues of material fact remain as to (1) whether Defendant sold, imported, or offered to sell the infringing product in the United States, and (2) whether Valois was willfully blind to any infringement.

The tenth issue is whether the Court should grant Defendant Valois’ Motion for Summary Judgment as to willful infringement when Valois alleges that (1) Plaintiffs’ decision not to seek preliminary injunction rules out a claim for post-litigation conduct, and (2) Valois acted with a good-faith belief that its new tube did not “quench.” The Court denies Defendant’s

motion because (1) failure to seek an injunction is one of many considerations when determining willfulness, and (2) the totality of the circumstances could establish that the Defendant willfully infringed on Plaintiffs' patents.

The final issue is whether the Court should grant Defendant Valois' Motion for Summary Judgment as to the indefiniteness when Valois alleges that MWV's failure to describe quenching in ambient air invalidates the patents. The Court denies Valois' motion because (1) the patent has a presumption of validity; (2) an embodiment of a patent is not to be read into the claims; and (3) one skilled in the art would be able to determine whether a tube is "rapidly cooled." Each issue will be discussed below.

I. BACKGROUND

This case concerns Defendants Valois of America, Valois of France (collectively, "Valois"), Rexam PLC, and Rexam Beauty and Closure's (collectively, "Rexam") alleged infringement of U.S. Patent Number 7,718,132 ("the '132 patent") and U.S. Patent Number 7,722,819 ("the '819 patent") owned by Plaintiffs MeadWestvaco Calmar and MeadWestvaco Corporation (collectively, "MWV" or "Plaintiffs"). The patents relate to the invisible dip-tube, the tube in a perfume bottle that disappears when immersed in liquid.

A. Patent History

In 2005, Saint-Gobain Calmar ("Calmar"), MeadWestvaco Calmar's predecessor, asked its tube supplier, Saint-Gobain Performance Plastics, to investigate the creation of an invisible dip tube. James Thomson, Julia DiCorleto, John Boyle, and Kevin Gray (the "Inventors") worked on "Project Invisible," the project that eventually led to the invisible dip tube. (Pl.'s Mem. Partial Summ. J. 3-4 (hereinafter Pl. Mem.)). After investigating many materials, the Inventors focused on fluoropolymers, which offered the qualities necessary for constructing the

invisible dip tube. (*Id.* at 4.) Fluoropolymers were thought by those skilled in the art to be carcinogenic, although this was a false belief. (See *id.* Exs. KK 42-43; LL 118; OO 41-42; UU; VV.)

On October 11, 2005, the Inventors filed a provisional patent covering fragrance products having an invisible dip tube. (*Id.*) The patent application identified the need in the art for concealing the dip tube to improve the overall aesthetic of the fragrance product. (*Id.*; Pl. Mem. Ex. A 1:22-45, 5:40-56.) To meet this need, the Inventors disclosed a fluoropolymer tube having high transparency, low crystallinity, and a refractive index nearly exactly that of perfume. (Pl. Mem. 4.) The Inventors distinguished their invention from previous tubes that were unable to meet the concealment requirements for fragrance products.

In July 2006, MWV bought Calmar, and it acquired the rights to the pending provisional patent application. At this time, prosecution responsibility was transferred to Finnegan Henderson LLP. In 2006, Finnegan attorney Robert Stanley “converted” the pending provisional application into a non-provisional application and also filed a non-provisional application containing the same written description. These two applications were prosecuted in parallel over the next three and a half years.

In March 2006, Valois learned of the MWV invisible dip tube, and later issued its own tube in May 2007. In April 2006, Rexam’s tube supplier successfully produced their first batch of dip tubes, which were identical to MWV’s tubes. By this time, MWV’s claimed invention had achieved acclaim, including a nomination for the “fragrance Oscars,” an Innova Pack 2007 Award, and the Luxe Pack Brazil 2007 Award. (Pl. Mem. 10.) According to the Luxe Pack Brazil 2007 panel, “the dip tube has always been a problem for luxury perfumes . . . [and] the invisible dip tube by Calmar[] has put an end to this problem.” (*Id.*)

From 2007-2010, both applications submitted by Stanley were examined by the PTO examiner, who was provided a number of documents, including unsolicited letters Defendants sent to MWV's counsel in 2007 and 2008, as well as twenty references identified by Defendants as invalidating prior art. (Pl. Mem. 5.) The Examiner held several interviews with MWV's counsel to discuss the differences between the claimed invention and the prior art.

In December 2009, the PTO allowed the claims of both applications. The Examiner identified the closest prior art of record—a French patent application to Clément, a U.S. patent to Pfeiffer, and textbook portions by Drobny entitled *Technology of Fluoropolymers*—failed to disclose that “the tube of the fragrance product is an extruded and quenched fluoropolymer.” In March 2010, attorney Stanley filed Comments to the Examiner, stating: “Applicant agrees with the Examiner’s ultimate conclusion that all of the present claims are allowable over the cited references and those of record, and in particular that the three noted references ‘fail to disclose that the tube of the fragrance product is an extruded and quenched crystalline fluoropolymer.’” (Pl. Mem. 6.) The PTO did not respond to Stanley’s comments. On May 18, 2010, the ‘132 patent issued, and one week later, the ‘819 patent issued. (Pl. Mem. Exs. A, B.)

B. Patent Claims

All of the claims of the ‘132 patent require “a tube” which “consists essentially of an extruded and quenched crystalline fluoropolymer having an XRD crystallinity not great than about 13%.” Rexam Mot. Summ. J. 3, Ex. 1 (hereinafter “Rexam Mot.”). All of the claims of the ‘819 patent require “a tube” which “comprises an extruded and quenched crystalline fluoropolymer having” “a crystalline content not greater than about 13%.” (Rexam Mot. 3, Ex. 2.)

The parties have long since conceded that Rexam's case rests on "crystalline content," while Valois' case rests on the issue of "quenching." (See Dkt. No. 227 at 2 ("As recognized by this Court from an early point in the case, the primary questions of alleged infringement involving Valois will center on 'quenching' while the primary questions of alleged infringement involving Rexam will center on 'crystalline content.'")); *id.* at 4-5 (agreeing with the Court that "the ultimate issue" of liability with respect to Valois is "quenching")); (*see also* Dkt. No. 105 at 4:12-13 ("And as Your Honor said it all relates to the quenching. Do we quench or not."); Dkt. No. 162 at 17:16-19 ("THE COURT: [I] suggested and I heard agreement and I saw nodding of heads on that side of the courtroom a couple of times when I suggested that Rexam lives and dies on crystallinity and Valois lives and dies on quenching.")).

1. Crystalline Content

The Patents require crystalline content to be determined according to the following parameters:

The particular XRD characterization parameters are as follows: Voltage: 45 kV, Current: 40 mA, XRD Machine: Bruker D8 Discover w/Gadds Detector, 0.3 mm slit, 0.3 mm collimation, Cu Radiation, Goebel Mirror (parallel beams), 0.5 mm oscillation along tube length, 5 frames (~15°/frame), 72 seconds/frame, Omega=7°, midpoint for detection frames=14°, 29°, 44°, 59°, 74°.

(Rexam Mot. Ex. 1, '132 patent at col. 4:66-5:6; Ex. 2, '819 patent at col. 5:10-17). The tube uses a fluoropolymer known as EFEP, which fits the needs of the invisible dip tube. The Patents do not describe all of the parameters necessary to conduct the test to determine "XRD crystallinity" and "crystalline content" as required by all of the claims of the '132 and '819 patents. (Rexam Mot. Ex. 6, 23:10-22.) Additionally, experts provided by both Rexam and MWV explicated that there are no published standard procedures or well-known industry

standards for performing the XRD crystallinity test required by the Patents. (*Id.* 38:13-16; 39:9-12; 39:13-24; 246:16-247:20.)

2. Quenching

The patents further require that the tube be “quenched,” although there does not appear to be a “quenching” industry standard.

During oral argument and in its position papers, Valois drew a distinction between an “old” tube and a “new” tube. Valois conceded that its “old” tube directly infringed on MWV’s patent. However, Valois claims that its new tube is not “quenched” because (1) it is cooled slowly, and (2) it is not immersed in water. Valois contends that the new tube cools on its own accord, inside a furnace-like chamber of stagnant air, similar to that of a cookie oven.

Following additional discovery, the record establishes that the new tube is actively cooled in a “cooling tank,” which uses a constant flow of chilled water that removes heat from the tube via the air in the tank.¹ (Pl. Supplemental Opp’n Ex. 1, 59:19-60:2.) The corporate designee of ABC Corporation² testified that that the cooling tank is equipped with a pump to recirculate cold water, with a chiller maintaining the water’s cold temperature. (*Id.* at 43:13.) The new tube cools in a span of 3.5 seconds, which is a longer time period than the previous tube. (*Id.* at

¹ It should be noted that MWV went to great lengths to obtain additional discovery in this matter. On June 15, 2011, Valois moved for summary judgment, even though it had not disclosed any information regarding the new tube’s infringement avoidance. As Valois’ attorneys represented, Valois happens to be completely ignorant of its manufacturer’s nonquenching process. As a result, MWV moved for additional discovery, pending the outcome of a Motion to Compel in the United States District Court for the District of South Carolina. The District of South Carolina granted MWV’s Motion to Compel, thus forcing Valois’ manufacturer to disclose the manufacturing process. As a result, many of the descriptions provided by Valois are inconsistent with those provided by the manufacturer. Oddly enough, Valois was unable to explain how it came to provide a representation of the nonquenching process in its Motion for Summary Judgment, even while claiming it had no understanding of or information regarding the making of its “new” tube.

² The Court will use “ABC Corporation” in lieu of the tube manufacturer’s real name in accordance with the Court’s Motion to Seal.

208:2-10.) ABC Corporation refers to the new tube's process as "air quenching," as the tube is never immersed in water. Additionally, ABC Corporation explicated that (1) the new nonquenching process removes heat from the tubes; (2) the cold air, which is a byproduct of the cold water, cools the tubes; (3) the process would not work if there were no cold water in the tank; and (4) the tube cools in 3.5 seconds. (*Id.* at 59:19-24; 61:10-13; 95:23-96:10; 157:1-4; 157:17-158:7; and 208:2-10.)

During the parties' summary judgment hearing, Valois admitted that it sold an infringing "old" tube to many of its customers. Following the issuance of the patent, Valois began selling a "new" tube, which Valois claims is not quenched. Despite its claims, Valois appears to have sold the "old" tube following the patents' issue, although it remains unclear how many of the "old" units were sold. According to Valois, it has only sold a minimal amount of the infringing units, while MWV contends that there are spreadsheets indicating sales in the millions. (See Pl. Opp'n Valois Mot. Summ. J. Ex. CC 3-4, Ex. DD (possibly establishing the sales of over two million potentially infringing pumps)).

On June 15, 2011, all three parties moved for summary judgment on several different grounds. On July 12, 2011 and July 27, 2011, the Court heard oral argument in regard to these motions. The Court now discloses its findings.

II. DISCUSSION

Summary judgment is appropriate in a patent case when there is no genuine issue as to any material fact and the moving party is entitled to judgment as a matter of law. Fed. R. Civ. P. 56(c); *Nike Inc. v. Wolverine World Wide, Inc.*, 43 F.3d 644, 646 (Fed. Cir. 1994). Whether a fact is considered to be "material" is determined by the substantive law, and "[o]nly disputes over facts that might affect the outcome of the suit under the governing law will properly

preclude the entry of summary judgment.” *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986). A genuine issue is one where the “evidence is such that a reasonable jury could return a verdict for the nonmoving party[,]” as opposed to evidence that “is so one-sided that one party must prevail as a matter of law.” *Id.* at 248, 252.

When analyzing a summary judgment motion, the facts must be construed in the light most favorable to the non-movant, and all reasonable inferences must be drawn in the non-movant’s favor. *Id.* at 255. Once a motion for summary judgment is properly made and supported, the opposing party has the burden of showing that a genuine dispute exists.

Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 586-87 (1986). The non-moving party’s opposition must consist of more than mere unsupported allegations or denials; it must be supported by affidavits or other competent evidence setting forth specific facts showing that there is a genuine issue for trial. Fed. R. Civ. P. 56(e); *Celotex Corp. v. Catrett*, 477 U.S. 317, 324 (1986).

III. ANALYSIS

The Court grants in part and denies in part each of the parties’ motions for summary judgment. Each party’s motion will be discussed in turn.

A. MWV’s Motion for Partial Summary Judgment

The Court grants Plaintiffs’ Motion for Partial Summary Judgment as to Defendants’ defenses of anticipation, obviousness, and inequitable conduct. First, the Court grants Plaintiffs’ motion as to anticipation because Defendants fail to show by clear and convincing evidence that a single prior art reference discloses each and every element of the ‘132 patent. Second, the Court grants Plaintiffs’ Motion as to obviousness because Defendants cannot present clear and convincing evidence for a *prima facie* case of obviousness. Finally, the Court grants Plaintiffs’

Motion as to inequitable conduct because Defendants cannot prove all of the inequitable conduct elements by clear and convincing evidence. Each issue will be discussed in turn.

1. Anticipation

The Court holds that Claim 15 of the ‘132 patent is not invalid as anticipated under 35 U.S.C. § 102 (2006).

Under the patent statutes, a patent enjoys a presumption of validity, *see* 35 U.S.C. § 282, which can be overcome only through facts supported by clear and convincing evidence, *see U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1563 (Fed. Cir. 1997). Not only does the burden of establishing the invalidity of a patent rest with the party challenging validity, *e.g.*, *Minnesota Mining & Mfg. Co. v. Chemque, Inc.*, 303 F.3d 1294, 1301 (Fed. Cir. 2002), but the challenger must also make that showing with clear and convincing evidence, *id.*, and on a claim-by-claim basis. *Amazon.com, Inc. v. BarnesandNoble.com, Inc.*, 239 F.3d 1343, 1351 (Fed. Cir. 2001). At no time does the burden ever shift to the patent holder to prove that its patent is valid. *See Am. Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1359 (Fed. Cir. 1984).

To establish a patent claim as invalid as anticipated, “the accused infringer must show by clear and convincing evidence that a single prior art reference discloses each and every element of a claimed invention.” *Silicon Graphics, Inc. v. ATI Techs., Inc.*, 607 F.3d 784, 796 (Fed. Cir. 2010). A collection of references cannot be treated as a single publication for anticipation purposes. *See Kyocera Wireless Corp. v. Int'l Trade Comm'n*, 545 F.3d 1340, 1351 (Fed. Cir. 2008).

The Court holds that Defendants cannot prove by clear and convincing evidence that the ‘132 patent was invalid because there is no publication embodying all of Plaintiffs’ claims.³

³ Claim 15 of the ‘132 patent claims:

15. A dispenser assembly for dispensing a liquid comprising:

While the combined collection of dozens of disparate references may lead to the claims of the ‘132 patent, the ‘132 patent claims are not embodied in a single, unified document. Defendants cite to prior art—French patent application to Clément, a U.S. patent to Pfeiffer, textbook portions by Drobny entitled *Technology of Fluoropolymers*, and the Kuyl presentations describing (1) a transparent tube with a refractive index of 1.38, (2) the need for concealing dip tubes within a fragrance product, (3) closely matching the refractive indices of the perfume and dip tube, and (4) a transparent perfume bottle dip tube—but cannot cite to a single prior art reference that combines every claim of the ‘132 patent. Therefore, Defendants cannot prove anticipation by clear and convincing evidence. (See Rexam’s Opp. Mot. Summ. J. 9-10, Valois’ Opp. Mot. Summ. J. 18.)

Valois additionally identifies the “Kuyl presentation materials,” multiple materials describing some of the claims. These items—a list and a compilation of materials—by nature, are not single embodiments of prior art, but uncooked recipes for the invisible dip tube. Moreover, the Kuyl materials are only a presentation, and may not even qualify as prior art. Even assuming that the Kuyl materials are prior art, Kuyl did not include an “extruded and quenched” claim, nor did they sufficiently refer to the Daikin materials to establish a prior art reference embodying all Plaintiffs’ claims.

In conclusion, the Court grants Plaintiffs’ Motion for Partial Summary Judgment as to anticipation because claim 15 of the ‘132 patent is not embodied in a single prior art reference.

a transport assembly; and,
a tube connected to the transport assembly;
wherein the tube consists essentially of an extruded and quenched crystalline fluoropolymer having an XRD crystallinity not greater than about 13%, the tube has a transparency of 80% or more, and the tube has a refractive index of from about 1.36 to about 1.38. (See Rexam Mot. Ex. 1, col. 8.)

2. Obviousness

The Court grants Plaintiffs' Motion for Partial Summary Judgment as to obviousness because Defendants cannot present clear and convincing evidence for each obviousness factor.

Under the patent statutes, a patent enjoys a presumption of validity, which can be overcome only through facts supported by clear and convincing evidence. *See* 35 U.S.C. § 282; *U.S. Surgical Corp.*, 103 F.3d at 1563.

Section 103(a) of the Patent Act states that a patent may not be obtained if the differences between the claimed invention "as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art." 35 U.S.C. § 103(a). Obviousness is a question of law based on specific factual findings, including (1) the scope and content of the prior art; (2) differences between the claimed invention and the prior art; (3) the level of ordinary skill in the art; and (4) any relevant secondary considerations, including commercial success, long-felt but unsolved needs, and the failure of others. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966); *DyStar Textilfarben GmbH & Co. v. C.H. Patrick Co.*, 464 F.3d 1356, 1360-61 (Fed. Cir. 2006). A patent "is not proved obvious merely by demonstrating that each of the elements was, independently, known in the prior art." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). Additionally, courts must be aware of the distortion caused by hindsight bias, and "must be cautious of arguments reliant upon *ex post* reasoning." *Id.* at 421. "[W]hen the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious." *Id.* at 416. A party's decision to act contrary to the accepted wisdom of the art indicates nonobviousness. *See United States v. Adams*, 383 U.S. 39, 52 (1966). Moreover, summary judgment of nonobviousness is appropriate

at the summary judgment phase. *See Crown Operations Int'l, Ltd. v. Solutia Inc.*, 289 F.3d 1367, 1378 (Fed. Cir. 2002).

The Court holds that Defendants cannot establish that Plaintiffs' patents are obvious through clear and convincing evidence because the *Graham* factors weigh in favor of MWV. First, the scope and content of the prior art, as well as the differences between the claimed invention and the prior art, did not directly lead to the invisible dip tube because the prior art did not anticipate the use of EFEP in fragrance products. While individual elements of the claimed invention were known in the prior art—such as making a transparent tube with a refractive index of 1.38, the need for concealing dip tubes within a fragrance product, closely matching the refractive indices of the perfume and dip tube, and a transparent perfume bottle dip tube—the evidence presented by the parties establishes that the prior art did not consider combining all of these individual elements to manufacture a fragrance product dip tube made from a crystalline fluoropolymer. (*See* Pl.'s Exs. KK 42-43; LL 118; OO 41-42; UU; VV.) The Examiner identified the relevant prior art, but distinguished the new invention as an extruded and quenched crystalline fluoropolymer.

Second, a person having ordinary skill in the art would not have thought of using EFEP for constructing a dip tube for fragrance products. According to the experts, fluoropolymers were unsafe for use in personal beauty products because such materials were thought to be carcinogenic. (*See* Pl.'s Exs. KK 42-43; LL 118; OO 41-42; UU; VV.) In short, the accepted wisdom was that the use of EFEP was unsafe, and the conventional understanding in the art was that fluoropolymers produced “extremely toxic fumes.” (*See* Pl. Ex. AA at 211.) MWV’s discovery that EFEP was harmless and ideal for the creation of the dip tube establishes that MWV was acting contrary to the accepted wisdom, and that a person skilled in the art would not

have thought it obvious to use EFEP to resolve this situation. As stated previously, a patentee, like MWV, that acts contrary to accepted wisdom is less likely to have its patent deemed obvious.

Third, the secondary evidence confirms the nonobviousness of the claimed invention. Plaintiffs' invention met a long-felt, but unmet, need in the art. Plaintiffs fulfilled a need because the visibility of a dip tube detracted from the overall aesthetics of a perfume bottle for perfume manufacturers. Plaintiffs have won industry-wide acclaim for the invisible dip tube, and have numerous honors and awards, including a FiFi nomination, the "Oscar of the fragrance world." (Pl. Exs. R-U, Z.) Plaintiffs won the Luxe Pack award for the NoC dip tube, with the reasoning that "the dip tube has always been a problem [because] it interferes with the overall harmony . . . in a transparent bottle. . . [Plaintiffs] have put an end to this problem." (Pl. Ex. U.) The claimed invention has also achieved great commercial success: obvious inventions do not often lead to such uniform plaudits. (Pl. Ex. GG.)

Additionally, Defendants failed to create an invisible dip tube. Both Defendants attempted to create an invisible dip tube, but succeeded only after (1) Plaintiffs began patent prosecution, and (2) Defendants obtained samples of MWV's tube from perfume manufacturers. (Pl. Exs. JJ 193-96; KK 31-32, 44-49, 114-118; MM 172, 180.) Defendants' inability to engineer its own dip tube from the 1980s onward speaks volumes to the nonobviousness of Plaintiffs' patent.

Finally, Defendants appear to rely on hindsight bias. Defendants use *ex post* reasoning to establish that a 2005 skilled artisan would know (1) how to manipulate a potentially carcinogenic polymer (2) primarily used in automotive and industrial situations (3) in combination with the teachings of several engineers (4) to create an invisible dip tube. There is no evidence

supporting that a 2005 skilled artisan would determine that the use of an extruded and quenched crystalline fluoropolymer is optimal for a fragrance product.

The Court rejects all of Defendants' arguments. First, the Court dismisses Valois's argument that EPEP substitution for TPX, another plastic, was obvious because the knowledge surrounding fluoropolymers suggested that such use was dangerous due to EFEP's allegedly carcinogenic nature. Valois itself did not want to frighten customers because it used EFEP in its allegedly infringing tube. (Pl. Ex. SS.) Second, the Court rejects Defendants' contention that the prior art "pointed to" the use of fluoropolymers because such logic uses hindsight bias, which the Court has been expressly told to avoid. While it might seem obvious to all parties to use EFEP in 2011, it was not obvious in 2005 when EFEP was believed to cause cancer.

For all of the above reasons, the Court grants Plaintiffs' Motion for Summary Judgment as to obviousness.

3. Inequitable Conduct as to the Asserted Patents

The Court grants Plaintiffs' Motion as to inequitable conduct because Defendants cannot prove all of the inequitable conduct elements by clear and convincing evidence.

According to the United States Court of Appeals for the Federal Circuit, "[i]nequitable conduct is an equitable defense to patent infringement that, if proved, bars enforcement of a patent." *Therasense, Inc. v. Becton, Dickinson & Co.*, -- F.3d --, 2011 WL 2028255, at *4 (Fed. Cir. May 25, 2011). "To prevail on a claim of inequitable conduct, the accused infringer must prove that the patentee acted with the specific intent to deceive the PTO." *Id.* at *9. The accused infringer must prove that (1) the applicant knew of the withheld reference, (2) the applicant knew that the reference was material, and (3) made a deliberate decision to withhold the information.

Id.

The Court holds that Defendants fail to provide clear and convincing evidence of inequitable conduct as to (1) Daikin EFEP’s prior art, (2) Stanley’s duty to disclose pages 66-69 of Drobny, and (3) the applicant’s misrepresentation of the state of the prior art. Each allegation of inequitable conduct will be discussed in turn.

a. Daikin EFEP Prior Art

The Court holds that Defendants fail to provide clear and convincing evidence of inequitable conduct’s three elements as to Daikin EFEP prior art. First, the Court concludes that Plaintiffs did not withhold any references. The evidence establishes that the applicants submitted every Daikin EFEP reference identified by Defendants in their “unsolicited letters” to MWV’s counsel in 2007 and 2008, including the letters themselves. In short, Plaintiffs submitted all the materials that they had available, including statements that establish that the EFEP “resins have a high transparency.” (*See* Pl. Mem. Exs. C-E, K-M, I-J.)

Second, the Court holds that the Plaintiffs did not withhold any material information related to Daikin EFEP prior art. A material reference cannot be material if it is cumulative or less relevant to information already provided to an examiner. *Leviton Mfg. Co. v. Universal Sec. Instruments, Inc.*, 606 F.3d 1353, 1359 (Fed. Cir. 2010). The two references in question—a 2002 presentation describing EFEP’s properties and a one page chart—are cumulative of all of the other documents that Plaintiff disclosed. Plaintiffs disclosed materials that described all of EFEP’s features, and disclosure of a presentation and a chart describing EFEP’s properties would have been duplicative. Accordingly, Plaintiffs’ alleged failure to produce these two items is not material.

Lastly, Plaintiffs’ decision not to disclose these two items does not prove deceptive intent. “[N]on-disclosure, by itself, cannot satisfy the deceptive intent element.” *See Larson*

Mfg. Co. v. Aluminart Prods. Ltd., 559 F.3d 1317, 1340 (Fed. Cir. 2009). Defendants are unable to meet their burden because they cannot provide any evidence of a specific intent to deliberately withhold information to the PTO.

The Court rejects all of Defendants' arguments. First, the Court dismisses Rexam's argument that the two non-disclosed items were critical because Plaintiffs disclosed no less than seven documents disclosing the transparency capabilities of EFEP, including EFEP's refractive index and its ability to "transmit[] more than 90% of visible light." (See Pl. Exs. C-E, K-M, I-J.) Moreover, the examiner is entitled to great deference, and the examiner presumably reviewed the relevant information when he granted the patent. At the very least, the examiner was able to review the letters that Defendants wrote to Plaintiffs and could have used that information to make a further request. Plaintiffs and the examiner had numerous meetings to discover the distinguishing, novel features of the invisible dip tube, presumably to ensure that prior art did not already encompass the invention. Second, the Court rejects Defendants' argument that the single most reasonable inference from nondisclosure is deception because (1) the law states otherwise, and (2) the information was duplicative. Third, the Court dismisses Valois' argument of examiner deception as to the "quench" term because non-disclosure, by itself, does not establish every element of inequitable conduct. Hence, the Court holds that Defendants fail to prove inequitable conduct as to the Daikin prior art.

b. Disclosing Pages 66-69 of Drobny

The Court holds that Defendants fail to provide clear and convincing evidence of inequitable conduct as to Stanley's non-disclosure of Drobny 66-69. Plaintiffs disclosed every reference identified by Defendants as relevant to patent prosecution, including sections of

Drobny. Additionally, Defendants do not oppose this particular argument. Hence, the Court holds that Defendants fail to prove inequitable conduct as to Drobny 66-69.

c. Misrepresentation of the State of the Prior Art

The Court holds that Defendants fail to provide clear and convincing evidence of inequitable conduct as to Plaintiffs' misrepresentation of the state of the prior art. First, the examiner, after reviewing the relevant prior art under Clement, Pfeiffer, and Drobny, determined that Plaintiffs' invention of a fragrance product using a crystalline fluoropolymer was not already embodied in prior art. Second, the alleged misrepresentations—Comments to the Examiner's Reasons for Allowance—were restated verbatim from the Notice of Allowance four months after the examiner allowed the patent. Lastly, the examiner had all prior art references as a result of Plaintiffs' numerous disclosures; he made his own determination as to whether the claims were allowable. As established previously, the examiner's determination is allowed great deference. Defendants' claim of one misleading sentence fails to overcome the hurdle of clear and convincing evidence.

In conclusion, Defendant is unable to prove inequitable conduct because (1) there was no specific intent to deceive the PTO; (2) Plaintiffs' alleged failure do not establish "but for" causation; and (3) Plaintiffs' voluminous disclosures establish that they were attempting to be as transparent as possible in applying for their patents.

For all of the above reasons, the Court grants Plaintiffs' Motion for Partial Summary Judgment as to Patent Validity and Enforceability.

B. Rexam's Motion for Summary Judgment as to Invalidity

The Court denies Defendant Rexam's Motion for Summary Judgment as to invalidity because the parties stipulated as to the meaning of XRD crystallinity and crystalline content, establishing that these terms are capable of construction.

Under the patent statutes, a patent enjoys a presumption of validity, which can be overcome only through facts supported by clear and convincing evidence. *See* 35 U.S.C. § 282; *U.S. Surgical Corp.*, 103 F.3d at 1563. The Patent Act requires that the claims of a patent point out and distinctly claim the subject matter which the applicant regards his invention. 35 U.S.C. § 112, ¶ 2. Indefiniteness is a question of law, and a claim is indefinite only “if it does not reasonably apprise those skilled in the art of its scope.” *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377, 1380, 1383-84 (Fed. Cir. 2005). To prove indefiniteness, the claims must not be amenable to construction. *Star Scientific, Inc. v. R.J. Reynolds Tobacco Co.*, 537 F.3d 1357, 1371 (Fed. Cir. 2008). Claims not amenable to construction are those that are “insolubly ambiguous.” *Haemonetics Corp. v. Baxter Healthcare Corp.*, 607 F.3d 776, 783 (Fed. Cir. 2010). In essence, if the meaning of the claim is discernible, even though the task may be formidable and the conclusion may be one over which reasonable minds will disagree, a claim is sufficiently clear on indefiniteness grounds. *Exxon Research & Eng'g Co. v. United States*, 265 F.3d 1371, 1375 (Fed. Cir. 2001). Close questions of indefiniteness should be resolved in favor of the patentee. *Id.* at 1380.

Indefiniteness “does not depend on a potential infringer’s ability to ascertain the nature of its own accused product to determine infringement, but instead on whether the claim delineates to a skilled artisan the bounds of the invention.” *SmithKline Beecham Corp. v. Apotex Corp.*, 403 F.3d 1331, 1340-41 (Fed. Cir. 2005). Definiteness is likely if the relevant values can be

“calculated or measured.” *See Marley Mouldings Ltd. v. Mikron Indus., Inc.*, 417 F.3d 1356, 1360 (Fed. Cir. 2005).

As an initial matter, the Court adopted the parties’ stipulation as to the terms “XRD crystallinity” and “crystalline content” in its previous Claim Construction Memorandum Opinion and Order. XRD crystallinity is defined as “crystallinity as measured by x-ray diffraction (XRD) using at least the XRD characterization parameters identified in the ‘132 patent at column 4, line 66 to column 5, line 6.” Crystalline content is defined as “crystallinity as measured by x-ray diffraction (XRD) using at least the XRD characterization parameters in the ‘132 patent at column 4, line 66 to column 5, line 6.”

The Court holds that Plaintiffs’ patent is not indefinite as a matter of law for six reasons. First, the terms “XRD crystallinity” and “crystalline content” are amenable to construction because the parties have already stipulated to their meaning. The parties have established that the claim is discernible because they were able to reach agreement as to the terms’ meaning: crystallinity as measured by x-ray diffraction (XRD) using at least the XRD characterization parameters in the ‘132 patent at column 4, line 66 to column 5, line 6. Second, the definition was sufficiently precise with the use of the GADDS manual that Rexam was able to attempt to design around the patent. If the definition had been vague, Rexam would have been unable to determine any crystallinity measurement. Third, although reasonable minds—in this case, the parties’ experts, Drs. Reibenspies and Ortega—disagree as to whether all of the required elements to test crystalline content are available, Plaintiffs’ testing parameters are sufficiently clear as to overcome a claim of indefiniteness. Fourth, Rexam’s indefiniteness claim is not dependent on whether it can ascertain its own infringement, but on whether the claim delineates to a skilled artisan the bounds of the invention. Drs. Reibenspies and Ortega were able to come

to a determination as to crystalline content, although they dispute the correct application of that testing. Fifth, Rexam has failed to cite to any cases in which a party stipulated to a construction and later successfully argued that its own stipulated construction was indefinite. Finally, there are material issues of fact remaining for the jury, and it will be the finder of fact's responsibility to determine whether there was sufficient information to test for crystallinity.

The Court rejects all of Rexam's arguments because it is unable to meet its burden of clear and convincing evidence. First, the Court holds that the patent examiner is given deference in his findings of patent validity. While Plaintiffs' patents could have further detailed all of the potential variables in crystalline content testing, the examiner did not require further explanation when he approved the patents. Second, Rexam undermined its own argument of indefiniteness by stipulating to the meaning of the two terms. The parties have proved that the claim is amenable to construction because they have provided the Court with an interpretation. The construction, while prefaced with the words "at least," encompasses not only crystallinity level testing with the terms listed in the patents, but any testing with additional variables. Third, Rexam's claim that the XRD crystallinity testing can produce infringing and non-infringing results strengthens the argument that reasonable minds might disagree: each party determined crystallinity despite disagreement regarding necessary parameters. Disagreement does not equate to invalidity, and disagreement as to crystallinity levels is an issue of infringement, not indefiniteness. Lastly, the parties' stipulation is not insolubly ambiguous because the tubes' crystallinity levels are measurable. Persons skilled in the art, such as Drs. Reibenspies and Ortega, can calculate crystallinity levels. Additionally, Rexam's reliance on *Honeywell v. Int'l, Inc. v. Int'l Trade Comm'n*, 341 F.3d 1332 (Fed. Cir. 2003) is distinguishable because one

skilled in the art would know to use the Gadds manual to determine whether the crystallinity levels were outside of the range dictated by the patents.

This case is factually similar to *Marley Mouldings*, 417 F.3d 1356. In *Marley*, the issue was whether a patent was invalid as indefinite when the patent failed to state the appropriate method of measurement for a plastic product. *Id.* at 1360-61. The Court of Appeals for the Federal Circuit ruled that the District Court erred because the trial court confused indefiniteness with infringement. *Id.* The patent at issue could use two distinct methods of calculation—weight or volume—and the patent failed to express which method of calculation to use. *Id.* While the patent did not properly disclose the appropriate measurement, the Federal Circuit held that the claim was not insolubly ambiguous because a calculation could be reached, and therefore not indefinite as a matter of law.

Marley Mouldings and this case are similar for three reasons. First, both cases involve the use of plastics. Second, both Defendants disagreed as to whether the patent sufficiently described the appropriate calculation for the claim at issue. Finally, both Defendants were able to make an appropriate calculation, even if the patent itself was nonspecific as to particular measurements. Accordingly, this Court holds in like same manner as the Federal Circuit, and denies Rexam's Motion for Summary Judgment as to indefiniteness.

For all of the above reasons, the Court denies Rexam's Motion for Summary Judgment as to indefiniteness.

C. Valois' Motion for Summary Judgment

The Court denies Valois' Motion for Summary Judgment because material issues of fact remain as to (1) infringement and (2) indefiniteness. Each issue will be discussed in turn.

1. Infringement

The Court denies Valois' Motion for Summary Judgment as to infringement because there are material issues of fact relating to all infringement claims relating to (1) quenching, (2) acts in the United States, (3) Valois' level of knowledge, and (4) willfulness. This being said, Valois is entitled to partial summary judgment under the doctrine of equivalents because Plaintiffs narrowed the literal scope of all claims in both applications to overcome prior art, depriving the term "quenched" to any equivalents. Each infringement claim is discussed below.

a. Literal Infringement

The Court holds that there are material issues of fact remaining as to whether Valois' tubes literally infringe on MWV's patents.

To prove literal infringement, a patentee must show that every limitation recited in the patent claims is found in the accused device. *Engel Indus., Inc. v. Lockformer Co.*, 96 F.3d 1398, 1405 (Fed. Cir. 1996). Literal infringement requires that a properly construed claim read on the accused device "exactly." *Id.*

In the case at hand, there is only one term of materiality—whether Valois' tube "quenches." The parties have long conceded that Valois' case rests on the issue of "quenching." (*See* Dkt. No. 227 at 2 ("As recognized by this Court from an early point in the case, the primary questions of alleged infringement involving Valois will center on 'quenching'"), *id.* at 4-5 (agreeing with the Court that "the ultimate issue" of liability with respect to Valois is "quenching")); (*see also* Dkt. No. 105 at 4:12-13 ("And as Your Honor said it all relates to the quenching. Do we quench or not.")); Dkt. No. 162 at 17:16-19 ("THE COURT: [I] suggested and I heard agreement and I saw nodding of theads on that side of the courtroom a couple of times when I suggested that . . . Valois lives and dies on quenching.")).

As an initial matter, the Court defined “quenched” as “rapidly cooled,” pursuant to its Claim Construction Memorandum Opinion and Order.

With this definition in mind, the Court holds that Valois cannot establish that its version of the invisible dip tube is not quenched. Viewing the evidence in the light most favorable to Plaintiffs, Valois’ tube is “quenched” for three reasons. First, the evidence shows that the tube does not cool on its own accord. Specifically, the tube is rapidly and actively cooled through the use of a “cooling tank,” which uses a constant flow of chilled water that removes heat from the tube through the air in the tank. (Pl. Supp. Opp’n Ex. 1, 59:19-60:2.) According to the tube manufacturer, the tube’s heat is transferred from the air to the water, while the water’s temperature is maintained at a constant cold temperature. Accordingly, the tube is quenched through the use of cold air, with the water being used as a cooling mechanism. Second, the evidence does not establish that the air inside the chamber is stagnant, or the tank is furnace-like—the tank maintains a cool temperature to allow for the rapid cooling of the tube. The tank is the conduit for the tube’s rapid cooling. While Valois’ cooling process appears to be slower than MWV’s, Valois’ quenching process still “cools,” and it cools “rapidly” because the process lowers the temperature of the extrudate from 500 degrees to 75 degrees in 3.5 seconds. Third, ABC Corporation admits that the tube is “air-quenched,” which is a type of quenching. As the patent itself does not limit quenching to liquid, the manufacturer’s specific use of the term “air-quenching” speaks to the tube’s quenching nature.

The Court rejects Valois’ “oven” analogy because ABC Corporation explicated that the temperature in the tank is maintained by chilled water at the bottom of the tank. Valois’ tube is not created in a “cookie oven”—the tube is rapidly cooled in a maintained environment, not in

ambient air. The Court is unaware of any type of oven that seeks to “bake” an item with chilled air.

For all the above reasons, the Court denies Valois’ Motion as to direct infringement because issues of material fact remain as to whether Valois’ tube is “rapidly cooled.”

b. Infringement under the Doctrine of Equivalents

The Court grants Valois’ Motion for Summary Judgment as it relates to the doctrine of equivalents because MWV added the “quenched” term to distinguish its claims from the prior art.

According to the doctrine of equivalents, infringement may still be found when literal infringement does not exist because an accused product does not meet a claim limitation exactly. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 732 (2002). When a patentee narrows a claim in response to a rejection, the patentee may not argue that the surrendered territory comprised subject matter is equivalent to the literal claims of the issued patent. *Id.* at 733-34.

In this instance, the Court grants Valois’ Motion for Summary Judgment because the “quenched” term was added to overcome prior art. Plaintiffs added “quenched” to its claims following a rejection by the patent examiner; the examiner allowed the claims to issue as patents following the amendment. (See Valois Mot. Summ. J. ¶¶ 7-10.) Hence, Plaintiffs narrowed the literal scope of all claims in both applications to overcome prior art, surrendering “quenched” to any equivalents under the doctrine of equivalents. See *Festo*, 535 U.S. at 732-34. Accordingly, the Court grants Valois’ Motion for Summary Judgment as it relates to “quenched” term and the doctrine of equivalents.

c. Direct Infringement

The Court holds that there are material issues of fact remaining as to whether Valois' tubes directly infringe on MWV's patents.

According to 35 U.S.C. § 271(a), a defendant that makes, uses, offers to sell, or sells in the United States, or imports into the United States, a product that meets every element of a claimed invention, directly infringes on a patent.

The Court denies Valois' Motion as to direct infringement because material issues of fact remain for two reasons. First, there are material issues as to whether Valois' tubes are "quenched." *See supra* §§ III.A.1.a.

Second, there are material issues of fact as to whether Valois of America and Valois France sell invisible dip tubes in the United States. According to Valois' corporate designee, "Valois of America buys its invisible dip tubing from Valois France." (*See* Pl. Opp'n Ex. V at 144.) If Valois of America purchases its dip tubing from Valois France, then both Valois entities would be infringing on MWV's patent because they are either "offering to sell" or "importing" into the United States another company's claimed invention. Hence, Valois' "new" tube is not entitled to summary judgment as to noninfringement.

The Court rejects all of Valois' arguments. First, the Court dismisses Valois' claim that no sales of the "old" tube were made following the issuance of MWV's patent. According to invoices, Valois sold the "old" tube to a company, Chantecaille Beaute, on May 22, 2011, two days after the patent issued. (*See* Pl. Opp. Valois Mot. Summ. J. Ex AA.) Valois' invoice is an offer for sale or sale in the United States, thus meeting § 271(a)'s requirement. Second, the Court rejects Valois' argument regarding sales in the United States because the evidence shows that Valois sold, offered to sell, or imported both the old and new tubes into the United States.

For all of the above reasons, the Court denies Valois' Motion for Summary Judgment as to direct infringement.

d. Contributory Infringement

The Court holds that there are material issues of fact remaining as to whether Valois' tubes contributorily infringe on MWV's patents.

For contributory infringement, a defendant must sell or offer for sale a material component, knowing that the component is especially made or adapted for use in an infringing product and is not a staple article suitable for non-infringing use. *See* § 35 U.S.C. 271(c).

The Court denies Valois' motion as to contributory infringement because material issues of fact remain as to (1) whether Valois' tubes infringe upon on MWV's patent, and (2) whether the new and old tubes are or were sold in the United States. *See supra* §§ III.A.1.a-c.

e. Induced Infringement

The Court holds that there are material issues of fact remaining as to whether Valois' tubes literally infringe on MWV's patents.

A claim of induced infringement requires proof that a defendant actively and knowingly encouraged infringement of the patents in suit. *Global-Tech Appliances, Inc. v. SEB S.A.*, 563 U.S. ___, 131 S. Ct. 2060 (2011). The prerequisite act of direct infringement may be found through specific instances of direct infringement or that the accused products necessarily infringe. *See Ricoh Co. v. Quanta Computer Inc.*, 550 F.3d 1325, 1341 (Fed. Cir. 2008) (citations omitted). The intent element can be satisfied through a finding of willful blindness. *Global-Tech*, 131 S. Ct. at 2069-72. Willful blindness can be found when (1) a defendant subjectively believes that a high probability of the fact exists, and (2) the defendant takes deliberate actions to avoid learning that fact. *Id.* at 2069.

The Court denies Valois' Motion as to induced infringement because issues of material fact remain as to (1) the location of sales and (2) whether Valois intended to induce infringement.

First, the Court holds that material issues of fact remain as to the location of sales because Valois sold pumps with the "old" tube after MWV's patents issued. *See supra* §§ III.A.1.a-c. (*See also* Pl. Opp'n Valois Mot. Summ. J. Ex. CC 3-4, Ex. DD (possibly establishing the sales of over two million potentially infringing pumps)).

Second, the Court holds that material issues of fact remain as to whether Valois was intentionally blind to ABC Corporation's production process for two reasons. First, Valois attempted to design around MWV's patents before the patents issued. (*See* Pl. Opp'n Ex. V at 113.) Second, Valois' main issue is whether its tubes are quenched, and Valois' employees are not able to provide any information regarding ABC's nonquenching process. This complete ignorance of the cooling process creates suspicion as to Valois' credibility, and a reasonable jury could conclude that Valois intentionally blinded itself to its manufacturer's actions. It is incredible for Valois to assert that it has not provided any parameters or instructions to its producers with whom it conducts business. Accordingly, this complete lack of knowledge is sufficient to create material issues of fact showing both (1) a high probability that Valois suspected infringement, and (2) Valois' deliberate avoidance.

Accordingly, the Court denies Valois' Motion for Summary Judgment as to induced infringement.

f. Willful Infringement

The Court holds that there are material issues of fact remaining as to whether Valois' tubes willfully infringed on MWV's patents.

Willful infringement requires objective recklessness. *In re Seagate*, 497 F.3d 1360, 1374 (Fed. Cir. 2007). When finding objective recklessness, courts must consider the following factors: (1) whether the infringer deliberately copied the ideas of another; (2) whether the infringer, when he knew of the other's patent, investigated the patent and formed a good-faith belief that it was invalid or that it was not infringed; (3) the infringer's behavior in the litigation; (4) the infringer's size and financial condition; (5) the closeness of the case; (6) the duration of the misconduct; (7) the remedial action by the infringer; (8) the infringer's motivation for harm; and (9) whether the infringer attempted to conceal its misconduct. *Read Corp. v. Portec, Inc.*, 970 F.2d 816, 826-27 (Fed. Cir. 1992); see *Netscape Commc 'ns Corp. v. Valueclick, Inc.*, 684 F. Supp. 2d 699, 728 (E.D. Va. 2010). Failure to obtain the opinion of a competent patent lawyer or properly investigate a patent may be evidence of objective recklessness. See *Spectralytics, Inc. v. Cordis Corp.*, 2011 U.S. App. LEXIS 11981, *26-*28 (Fed. Cir. June 13, 2011).

In applying these principles in the light most favorable to the nonmovant, several of these factors weigh in favor of MWV. Specifically, Valois was objectively reckless because (1) Valois specifically copied MWV's design; (2) Valois lacked the good faith belief that its tube did not infringe on MWV's design; (3) Valois' had a pure pecuniary motive; (4) Valois attempted to conceal its infringement; and (5) Valois failed to properly investigate its own conduct. While the Court considered the fact that MWV did not obtain a preliminary injunction, this tactical move is not dispositive in determining willfulness, and is but a single factor.

Accordingly, the Court denies Valois' Motion for Summary Judgment for willful infringement.

2. Indefiniteness

The Court denies Valois' Motion for Summary Judgment as to invalidity because the term "quenched" is sufficiently definite for construction.

Under the patent statutes, a patent enjoys a presumption of validity, which can be overcome only through facts supported by clear and convincing evidence. *See 35 U.S.C. § 282; U.S. Surgical Corp.*, 103 F.3d at 1563. Indefiniteness is a question of law, and a claim is indefinite only "if it does not reasonably apprise those skilled in the art of its scope." *IPXL Holdings*, 430 F.3d at 1380, 1383-84. To prove indefiniteness, the claims must not be amenable to construction. *Star Scientific, Inc.*, 537 F.3d at 1371. Claims not amenable to construction are those that are "insolubly ambiguous." *Haemonetics Corp.*, 607 F.3d at 783. In essence, if the meaning of the claim is discernible, even though the task may be formidable and the conclusion may be one over which reasonable minds will disagree, a claim is sufficiently clear on indefiniteness grounds. *See Exxon*, 265 F.3d at 1375. Close questions of indefiniteness should be resolved in favor of the patentee. *Id.* at 1380. Lastly, indefiniteness "does not depend on a potential infringer's ability to ascertain the nature of its own accused product to determine infringement, but instead on whether the claim delineates to a skilled artisan the bounds of the invention." *SmithKline Beecham Corp.*, 403 F.3d at 1340-41.

The Court holds that Plaintiffs' patent is not indefinite as a matter of law for four reasons, after viewing the evidence in the light most favorable to the nonmovant. First, Valois' reverse-engineering of an "unquenched" tube establishes that one trained in the art would understand the term's meaning. If Valois claims that its tubes are unquenched, then Valois must comprehend

the term. Second, MWV specifically described a single embodiment of the invisible dip-tube. MWV is not required to describe every embodiment, but must describe and be in possession of a single embodiment. The evidence suggests that MWV did possess an embodiment of a quenched invisible dip tube, which is sufficient to obtain the necessary patents. Third, a reasonable jury would be able to determine whether a tube is “rapidly cooled.” While it is the Court’s duty to determine claim construction, it is a jury’s duty to apply those terms to the facts presented by the parties. Accordingly, a jury will weigh the evidence to determine whether Valois’ tube is rapidly cooled. Finally, the Court holds that MWV’s patent is amenable to construction. While Valois claims that “rapidly cooling” lacks clear demarcation, indefiniteness does not require that a potential infringer be able to ascertain the nature of its own accused product to determine infringement. As Valois has argued repeatedly, its tube is nonquenched, which means that those skilled in the art have at least attempted to design around MWV’s patent claims. A reasonable jury could find that a tube cooled in 3.5 seconds is “rapidly cooled.”

For all of the above reasons, the Court denies Valois’ Motion for Summary Judgment as to indefiniteness.

IV. CONCLUSION

In conclusion, the Court grants in part and denies in part the parties' Motions for Summary Judgment. For the foregoing reasons, it is hereby

ORDERED that Plaintiffs' Motion for Summary Judgment as to anticipation is GRANTED. It is further

ORDERED that Plaintiffs' Motion for Summary Judgment as to obviousness is GRANTED. It is further

ORDERED that Plaintiffs' Motion for Summary Judgment as to inequitable conduct is GRANTED. It is further

ORDERED that Defendant Rexam's Motion for Summary Judgment as to invalidity is DENIED. It is further

ORDERED that Defendant Valois' Motion for Summary Judgment as to infringement is DENIED. It is further

ORDERED that Defendant Valois' Motion for Summary Judgment on infringement under the doctrine of equivalents is GRANTED, so far as it relates to the term "quenched" and its lack of equivalents. It is further

ORDERED that Defendant Valois' Motion for Summary Judgment as to direct infringement as to both the "new" and "old" tubes is DENIED. It is further

ORDERED that Defendant Valois' Motion for Summary Judgment as to contributory infringement as to both the "new" and "old" tubes is DENIED. It is further

ORDERED that Defendant Valois' Motion for Summary Judgment as to induced infringement is DENIED. It is further

ORDERED that Defendant Valois' Motion for Summary Judgment as to willful infringement is DENIED. It is further

ORDERED that Defendant Valois' Motion for Summary Judgment as to indefiniteness is DENIED.

The Clerk is directed to forward a copy of this Memorandum Opinion and Order to counsel of record.

ENTERED this 18th day of August, 2011.

Alexandria, Virginia

/s/
Gerald Bruce Lee
United States District Judge